

Monthly Update

February 2019



Market Commentary

Powered by Transparent Energy and Gary Graham, Director of Energy Management

On the verge of the halfway point through a pivotal February, the natural gas storage and price landscape leading into the Spring is beginning to emerge out of a tumultuous fog, though the neck is still craned and the eyes strained. A mix of bearish weather and significantly reduced heating demand in late January brought forth the final two storage withdrawals for the month that each contributed to a contraction in the 1-year storage deficit, and narrowed the deficit when compared to the 5-year average levels. In fact, the EIA natural gas storage report for the week ending Jan 18th (released 01/24) showed a small surplus (1.4%) when compared to the same week in the year prior for the first time since the winter of 2016/17. Of course, the 1-year comparison is not quite as revealing as the comparison against the 5-year average, which still stood at an 11.4% deficit at that point.

A matter of days later, true to form and in keeping with the recent trend of pendulum-like extremes, a new single day natural gas consumption record of 150 Bcf was set on January 30, surpassing the prior record set on January 1, 2018. This single day consumption record was accompanied by several other low-temperature records as a crippling cold resultant of a polar vortex gripped most of the major demand centers in the United States for that same week. In its wake was a hefty withdrawal of -237 Bcf, the largest of the withdrawal season so far and quite possibly the largest we will see this season. With the large withdrawal bringing storage to 1,960 Bcf, the deficit to the 1-year level expanded back to 6.4% (vs. 2,095 Bcf) and a 17.5% deficit to the 5-year average (2,375 Bcf). In a seemingly counterintuitive move, the prompt-month contract actually moved down in the days/week that followed as the February contract had expired and most market participants turned their attention to the end of February and beyond. In fact, the nearby futures contract was trading below the \$2.60 mark at the end of last week. Any more movement down, and we could be testing the most recent lows in March of 2016. In November, with the peak season on the horizon, the price of nearby futures rose to the highest price since 2014 at \$4.929 per MMBtu. In early January 2019, the price dropped briefly below the \$2.90 level, followed by a recovery to \$3.722. It's been a wildly volatile couple of months to put it simply.

This week's upcoming withdrawal should prove to be relatively muted, around 90 Bcf, and should swing the pendulum back towards some contraction of the 1 & 5-year storage deficits. So, with about nine weeks remaining in the withdrawal season, it's best to focus on what is on the horizon from a weather/demand perspective that could further influence volatility or sustained price momentum in either direction. As of late, the market has been moving up on the heels of updated short-term weather models calling for a more widespread sustained cold ushered in by Winter Storm Maya with some serious potential staying power in the Midwest & Northeast. On a heating demand basis, the last week of February could show heating demand to be ~20% higher than the 30-year average. Although storage draws naturally decline going forward, the market may not be discounting this risk properly. But like with all things weather, the models could change overnight so it's important to stay vigilant on the updates.

Quick Hits

- DC lawmakers have approved the Clean Energy Act effective by the end of this Feb 2019. The new laws incrementally increases renewable energy costs for all DC consumers. Supply agreements executed prior to the law's effective date will be grandfathered in for the term of their agreement with the lower renewable cost structure.
- Index on-peak averages for January cleared around \$39/MWh in PJM West Hub and \$63/MWh in Mass Hub. The latter half of January featured especially high index prices, thanks to the brutal cold. In contrast, warmer weather so far in February has softened prices.
- The New England ISO posted the results of its Forward Capacity Auction (FCA) #13 for Planning Year (PY) 2022/23, clearing at \$3.80/kW-month or an 18% drop from \$4.63/kW-month for FCA #12 (2021/22).

Bullish Factors

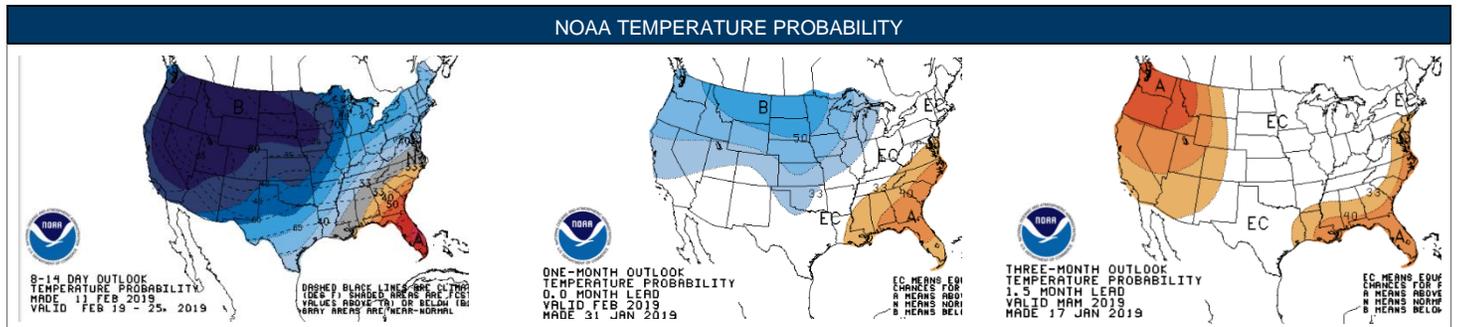
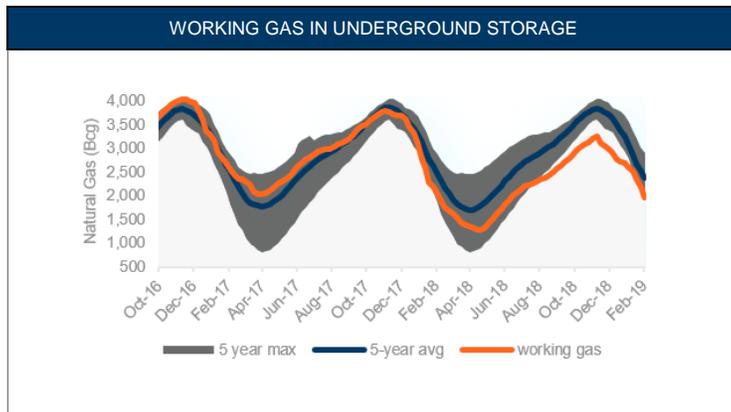
- Market is up more than 4% off of supportive weekend adjustments to the 1-2 week temperature forecasts suggesting a cooler Midwest region.
- Population-weighted Heating Degree Days (HDDs) across the US are 9% higher this winter season as of Feb 9, according to NOAA data.
- The first half of 2019 will a busy one for the U.S. LNG business. Greenlit final investment decisions for projects over the next six months could eventually inject \$20-25 billion into the Gulf Coast region alone over the next four years. And over the next seven years, it is easy to see U.S. LNG gas export capacity exploding to 20-25 Bcf/d. That would be around a quarter of current U.S. gas output.

Bearish Factors

- Henry Hub NYMEX spot natural gas prices have lost \$1.85/mmbtu since mid-December.
- Although the deficit against the five-year average stretched out to about 415 bcf, the market is looking ahead to this week's data when a sharply downsized withdrawal is anticipated in conjunction with this past week's mild weather trends.

Natural Gas

| Region | CURRENT/HISTORICAL STORAGE (Bcf) | | | | | HENRY HUB PROMPT MONTH NAT GAS SETTLEMENTS | | | | | | | | |
|--------------|----------------------------------|-------------|----------------|----------|-------------|--|-----------------|--------------|--------------|--------------|--------------|----------|---------------|----------------|
| | 11/23/2018 | 11/16/2018 | % Chg. | Year Ago | 5-Yr Avg. | Trade Date | Open | High | Low | Settle | % Chg. | Est. Vol | | |
| East | 468 | 527 | -11.20% | ▼ | 488 | 530 | 2/7/2019 | 2.682 | 2.691 | 2.549 | 2.551 | ▼ | -4.88% | 237,343 |
| West | 799 | 898 | -11.02% | ▼ | 887 | 986 | 2/6/2019 | 2.865 | 2.72 | 2.651 | 2.662 | ▼ | -7.09% | 103,904 |
| Producing | 692 | 771 | -10.25% | ▼ | 703 | 858 | 2/5/2019 | 2.666 | 2.708 | 2.639 | 2.662 | ▼ | -0.15% | 86,241 |
| TOTAL | 1959 | 2196 | -10.79% | ▼ | 2078 | 2374 | 2/4/2019 | 2.705 | 2.733 | 2.663 | 2.660 | ▼ | -1.66% | 124,008 |

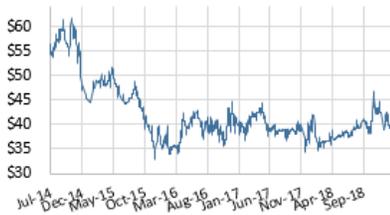


Weekly Average Retail Electricity Price Trends (Mar Start)

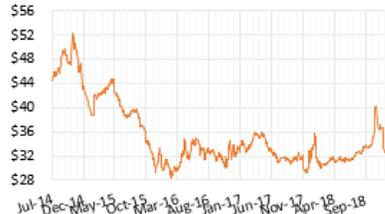
| Week Ending | New Jersey | New York | Massachusetts | Ohio | Illinois | Texas | DC | Pennsylvania | Connecticut |
|-------------|------------|----------|---------------|----------|----------|----------|----------|--------------|-------------|
| 1/4/2019 | \$0.1046 | \$0.0650 | \$0.1172 | \$0.0579 | \$0.0585 | \$0.0579 | \$0.0779 | \$0.0675 | \$0.0980 |
| 1/25/2019 | \$0.1053 | \$0.0657 | \$0.1185 | \$0.0597 | \$0.0582 | \$0.0601 | \$0.0799 | \$0.0687 | \$0.0995 |
| 2/1/2019 | \$0.1043 | \$0.0648 | \$0.1175 | \$0.0583 | \$0.0580 | \$0.0601 | \$0.0792 | \$0.0679 | \$0.0981 |

*actual rates may vary by usage. Rates are aggregated from sources reflecting the General Service (GS) rate class

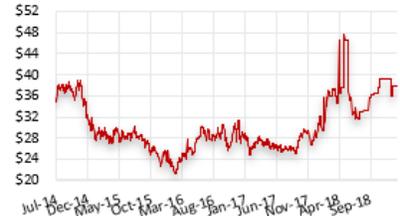
NYISO - Zone J



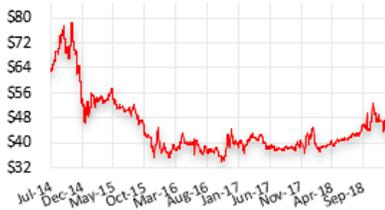
PJM - PSEG



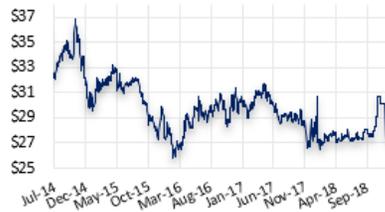
ERCOT - TX NORTH



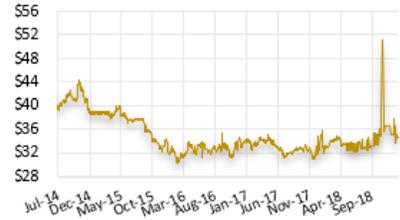
NE-ISO - MASS HUB



PJM - COMED



PJM - ATSI



Energy Market News

New law to lead to guaranteed rate increases for consumers in the DC area

<https://bit.ly/2GnwPVh>

Despite the LNG export market looking to take off, bullish sentiments indicate production shortcomings could be a major price factor in the future

<https://bit.ly/2TKygAf>

New Green Deal may be excluding nuclear assets, despite concerns from energy researchers

<https://bit.ly/2GDDlqk>

EIA Short Term Energy Outlook

<http://www.eia.gov/forecasts/steo/>

Data Highlights

WTI crude oil futures price

02/07/2019: \$52.64 /bbl

↓ \$1.15 from week earlier

↓ \$9.15 from year earlier

Natural Gas Inventories

02/01/2019: 1,960 Bcf

↓ 237 Bcf from week earlier

↓ 118 Bcf from year earlier

Natural gas futures price

02/07/2019: \$2.551/MMBtu

↓ \$0.263 from week earlier

↓ \$0.151 from year earlier

Weekly coal production

02/02/2019: 13.035 million tons

↓ 1.163 million tons week earlier

↓ 2.557 million tons year earlier

For more Information:

Gary Graham

Director of Energy Management
Cushman & Wakefield
+1 312.470.1851
gary.graham@cushwake.com

Luke Nemes

Transparent Energy
www.TransparentEdge.com
+1 862.210.8770
lnemes@transparentedge.com

Copyright © 2019 Cushman & Wakefield. All rights reserved. The information contained within this report is gathered from multiple sources considered to be reliable. The information may contain errors or omissions and is presented without any warranty or representations as to its accuracy.

The information contained in this report has been gathered from public and/or private sources and is provided "as is" and is not intended for trading purposes or advice. Transparent Energy makes no guarantee's or warranties, express or implied, as to the accuracy, quality, reliability, or completeness of the information provided herein. Transparent Energy is not liable for any informational errors or incompleteness or for any transactions made based on the information provided herein. Report sources: <http://eia.gov>, <http://bit.ly/1GI07Z3>, <http://bit.ly/1HBGL1Q>